



A Capitol Region Guide to

Community Quick-Builds

for

Complete Streets

Capitol Region Complete Streets Plan
Capitol Region Council of Governments

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And to all representatives from the 38 CRCOG municipalities who participated in Technical Advisory Committee meetings, thank you!

Cover: The Jubilee Street plaza brought traffic-calming and an additional 8,000 square feet of new open space to New Britain's east side. The plaza will be made permanent by the City of New Britain. Photo: Street Plans

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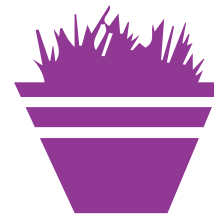
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In the fall of 2019, a large curb extension was installed at the southeast corner of Hartford's Main Street and Charter Oak Avenue. Photo: Joe Gaylor



Quick-Build Methodology

Curb extensions. Bus lanes. Pedestrian plazas. Protected bikeways. These are just a few of the projects communities large and small are implementing with the Quick-Build methodology. At a time of increased competition for funding transportation improvements, the low cost and iterative nature of Quick-Build projects are increasingly popular because they accelerate project delivery, provide a platform for experiential public engagement, and instigate a paradigm shift toward safer, more complete streets.

Great. But What Are Quick-Build Projects, Really?

Quick-Build projects are defined by the following three characteristics:

Timeline

Implemented within a faster project delivery timeline than typical capital design and reconstruction projects; typically a few months to two years.

Budget

Temporary enough to be completed on a small budget using interim, flexible materials, but durable enough to provide the time, political capital, and budget to evaluate and iterate upon the initial project design; and

Process

Utilize a people-centric, holistic process to bridge the gap between successful ephemeral demonstration projects and capital reconstruction, which may be supported by scalable policy/program development.

Cities like Burlington, VT, San Francisco, CA, and New York City have developed highly-visible, formalized Quick-Build programs to address a variety of urgent street safety and transportation needs. Dozens of other communities and regions across North America, such as Connecticut's Capitol Region, are now undertaking similar initiatives.

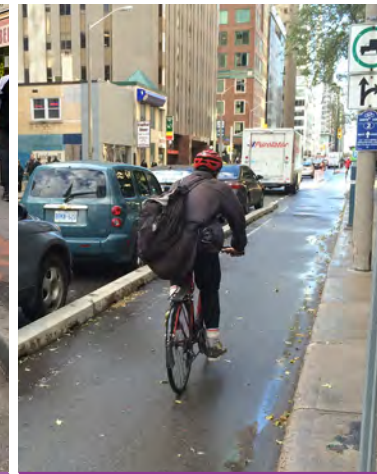
Indeed, government departments and agencies are not only recognizing the benefits of the Quick-Build methodology, they are prioritizing it as a legitimate form of project delivery with specific budget line items, teams comprised of internal and external leaders (non-profits, foundations, consultants, etc.), and administered by streamlined permitting, materials standards, and procurement processes that aim to achieve scalability. In other words, Quick-Build methods are becoming a standard part of the project planning and delivery process.

But perhaps the most salient quality of the Quick-Build methodology is that it provides a participatory learning experience for all involved in the planning process and impacted by the results. Regardless of what makes it "quick", a project that adheres to at least one of the above criteria is sure to break down silos, encourage innovation, deliver public benefits, and bridge the gap between a government and the people it serves.

The following page illustrates how the Quick-Build methodology fits within the larger tactical urbanism project delivery framework, each defined by cost, materials durability, public involvement and more.

Quick-Build

This chart illustrates the progression of an iterative approach to project delivery. Though not all projects need to follow this exact model, it can be helpful to see how each project type builds towards the next, using incremental steps to deliver a capital project intended to create long-term change.



Project Type (time interval · relative cost)	DEMONSTRATION (1 day - 1 month · \$)	PILOT (1 month- 1+ year · \$\$)	INTERIM DESIGN (1 year - 5+ years · \$\$\$)	LONG-TERM/CAPITAL (20 years - 50+ years · \$\$\$\$)
Project Leaders	Anyone (city, non-profit, business owner, students etc.)	Government / organizational leadership + involvement required	Government / organizational leadership + involvement required	Government / organizational leadership + involvement required
Permission Status	Sanctioned or unsanctioned	Sanctioned	Sanctioned	Sanctioned
Materials + Maintenance	Very low-cost, typically low-durability. May be borrowed, easily made, or purchased; no maintenance required	Relatively low-cost, but semi-durable materials to maximize design flexibility while minimizing maintenance needs	Low and moderate cost materials, designed to balance design flexibility, performance outcomes, and maintenance	High-cost, permanent materials that cannot be adjusted easily; maintenance needs vary tremendously
Public Involvement	Optional before project implementation, Recommended during brief project lifespan	Required, frequent before implementation and frequent during evaluation period	Recommended, frequent before implementation, required during initial evaluation period, optional thereafter	Required before implementation, recommended during implementation and initial evaluation period, optional thereafter
Flexibility of Design	High: organizers expect project to be adjusted and removed within a short timeline, typically one week or weekend	High: proponents expect project to be adjusted; it <i>may</i> be removed if it does not meet goals upon initial evaluation	Moderate: organizers expect project to be adjusted, but it is intended to remain in place until capital upgrades are possible	Low: project is considered a permanent capital upgrade that is unlikely to be adjusted significantly once installed
Data Collection / Evaluation	Qualitative: optional Quantitative: optional	Qualitative: required Quantitative: required	Qualitative: recommended Quantitative: required	Qualitative: optional Quantitative: recommended

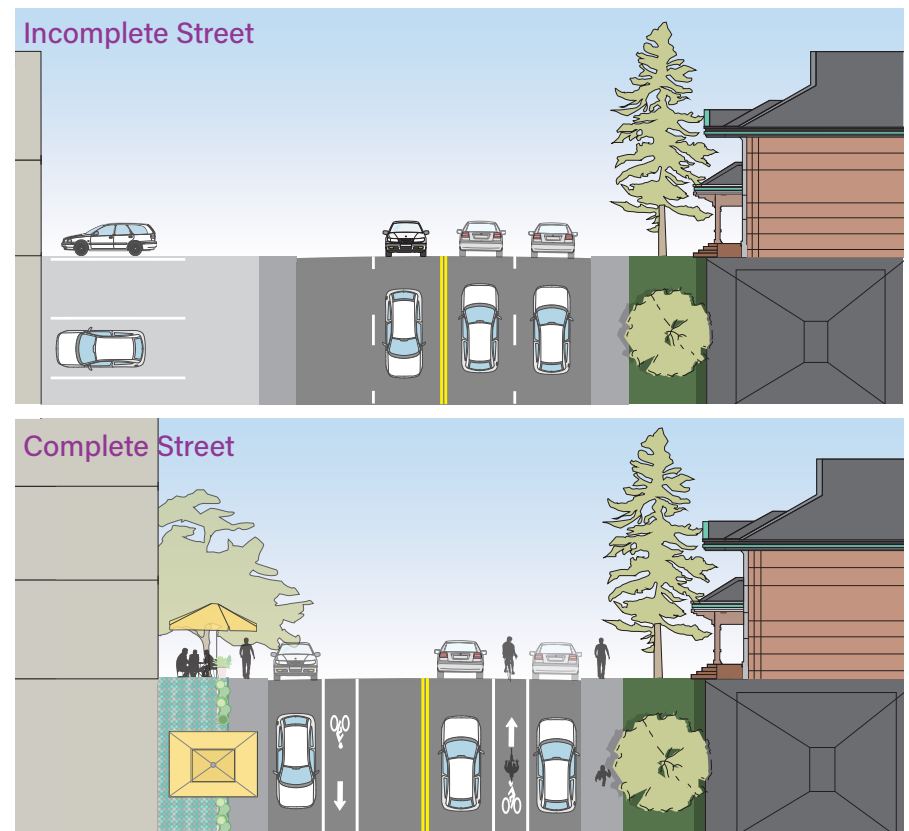
Terms and diagram format based on PeopleForBike's "Quick Builds for Better Streets," which defines the pilot / interim time intervals above as "quick build" projects. To access Quick Builds for Better Streets, visit: bit.ly/QuickBuildsReport (Images: Street Plans).

A Complete Street, Quickly

The Capitol Region Council of Governments (CRCOG) is developing a plan and policy for a Complete Streets network in Greater Hartford, prioritizing the design and operation of streets that enable safe travel for all users. The plan inventories existing infrastructure, maps desired regional complete streets connections, includes an action plan for network development, and proposes a policy for regional implementation. Municipalities in the region are also receiving advice on best practices related to implementation and policy in a variety of contexts (from rural to urban).

There is no specific formula for Complete Streets design, as so many complex decisions must be made in response to a wide variety of built, social, economic, and environmental contexts. Thus, Complete Streets does not mean simply adding a bicycle lane or a crosswalk where previously there was none. Instead, Complete Streets plans and policies seek to provide meaningful transportation choices for all people, and in urbanized areas, to put public life back into the public realm — defined as the public space that exists between private buildings. This approach elevates all users of the street onto an equitable playing field and changes the way transportation projects are planned/delivered.

CRCOG has already applied the Quick-Build methodology to advance Complete Streets in Greater Hartford. In October 2018, the City of New Britain and the CRCOG planning team implemented a pilot pedestrian plaza at the intersection of Jubilee Street and East Street in the East Side neighborhood. With this document, CRCOG seeks to expand its use of the methodology to create Quick-Build Complete Streets infrastructure throughout the region. Read on for information on CRCOG's land use context zones and street typologies, and which Quick-Build project types might be appropriate in your community.



In the above diagram, 87% of the right-of-way is reserved for vehicular-only use, leaving just 13% for non-motorized transportation/pedestrians. With the addition of bike lanes, the replacement of surface parking with wider sidewalks and accessible cafe space, and longer-term land use changes, motor-vehicle-only space is reduced to 46%, leaving the majority 54% for non-motorized, public, and more financially productive land uses.



A large public plaza was implemented along Jubilee Street in New Britain as part of the CRCOG Complete Streets Plan. Photo: City of New Britain



Regional Context Zones

CONTEXT-SENSITIVE PLANNING

The Institute for Transportation Engineers (ITE) describes conventional engineering practice as a process that “prioritizes vehicular mobility and access using functional classification, design speed, traffic volume, and vehicular level of service as the primary determinants for design criteria—an approach with limited sensitivity to the surrounding context.”

A counter-approach and recommended practice is what the Federal Highway Administration calls Context-Sensitive Solutions (CSS). CSS recognizes that thoroughfare design should respond to and positively influence the character of neighborhoods, advancing the community vision for the future. FHWA describes CSS as “an approach that considers the total context within which a transportation improvement project will exist.” Thus, applying the principles of CSS in thoroughfare design allows for planners and engineers to integrate Complete Streets design principles that are more consistent with their surroundings and that support the activities of the adjacent or desired land uses and built form.

The CSS and Complete Streets approach does not abandon conventional traffic measurement tools entirely, but augments them with new people and context-oriented considerations that enrich the design decision-making process.

GREATER HARTFORD CONTEXT ZONES

From the most rural settings to the most urban, think downtown Hartford, the CRCOG Complete Streets planning process identified six normative context zones, and four sub-context zones. They are:

- **C1: Natural**
- **C2: Rural**
 - C2 T: Small Town General
- **C3: Suburban**
 - C3 SR: Suburban Residential
 - C3 SC: Suburban Commercial
 - C3 TC: Town Center
- **C4: Urban General**
- **C5: Urban Center**
- **C6: Urban Core**

From C1 to C6, each context zone becomes more urbanized, with less natural or agricultural areas and more structured/programmed public open space; a greater diversity of land uses and resulting building types and functions; and an increasing intensity of social, economic, and cultural activity.

Within these six context zones, 10 common thoroughfare types were identified. In the following pages, the reader will find an overview of these context zones, their appropriate thoroughfare types, and how they relate translate to conventional functional classification. This is followed by a “menu” of Quick-Build interventions that are generally appropriate given the range of thoroughfare types and their corresponding context.

C1 - Natural



The C1 context zone is defined by the least urbanized areas of the Greater Hartford region. Thoroughfares within C1 are typically within designated natural areas and state parks, like Talcott Mountain State Park and Nathan Hale State Forest, and are generally two-lane Rural Highways or Rural Roads that provide access to recreational or agricultural land uses.

C4 - Urban General



The C4 context zone is defined by smaller building lots, a more rectilinear block structure, and a broader variety of inherently walkable thoroughfares and land use patterns. C4 introduces the Urban Street Avenue and Urban Residential Avenue and is typified by Hartford's South End, New Britain's East Side, or the Main Street neighborhood of East Hartford.

C2 - Rural



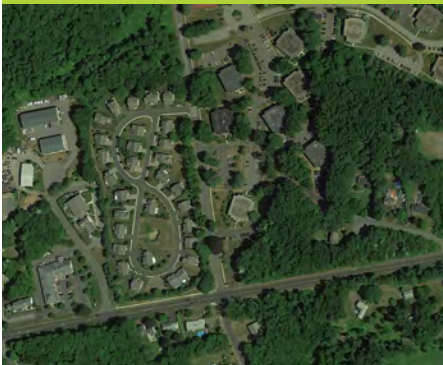
The C2 context zone encompasses agricultural and rural residential areas of the region, including incorporated towns like Mansfield and Southington. This zone also includes the CT2 Small Town General, which includes local-serving commercial areas. 7 of the 10 thoroughfare types may be found in this context, with the greatest diversity in the CT2 sub-context zone.

C5 - Urban Center



The C5 context zone includes the region's larger urban centers/urban main streets outside of downtown Hartford. This includes downtown New Britain and West Hartford, where a more tight-knit mixture of uses, multi-family housing types, and public spaces are reinforced by a full variety of urban thoroughfares that focus on walking, cycling and transit use.

C3 - Suburban



The C3 context zone is found between more urbanized and more rural areas. C3 is typified by more auto-oriented thoroughfares that may need retrofitting to consider a broader user base. C3 includes three sub-zones: Suburban Residential (C3R), Suburban Commercial (C3C), and Town Center (C3T). Adding pedestrian, cycling, and transit facilities in these locations is paramount.

C6 - Urban Core



The Capitol Region's only C6 context zone is downtown Hartford. In this zone, all urban thoroughfare types may be found. The strongest consideration of thoroughfare design in this context should be the pedestrian, followed by cycling and transit riders.

THOROUGHFARE TYPES + CLASSIFICATION

The CS thoroughfare typology* introduces a broader and more specific range of street types applied across a variety of context zones. This approach creates a more flexible and context-sensitive way to design streets that capably distribute traffic while also recognizing streets are conduits of commercial, social, and ecological benefit.

The table at right translates the CRCOG Complete Street (CS) thoroughfare typology to the conventional functional classification system described on page 9 of this Guide.

- **C:** Collector
- **L:** Local
- **MA:** Minor Arterial
- **PA:** Principal Arterial

The translation is intended to help street designers, engineers, public officials, and advocates better understand how to apply the CS thoroughfare typology across the Capitol region. From here, the project matrix on the following two pages outlines what type of Quick-Build projects are appropriate for each CS thoroughfare type. Finally, the remainder of the chapter provides a written and visual explanation for each type of intervention.

Context Zone	CS Thoroughfare Type	Functional Classification
C1 - Natural		
	Rural Highway	C MA PA
	Rural Road	C MA PA
C2 - Rural		
	Rural Highway	C MA PA
	Rural Road	C MA PA
C2 T - Small Town General		
	Boulevard	MA
	Suburban Commercial Avenue	C MA PA
	Suburban Residential Avenue	C MA PA
	Suburban Residential Street	C MA PA
	Community Street	C MA PA
C3 - Suburban		
C3 SC - Suburban Commercial		
	Boulevard	C MA PA
	Suburban Commercial Avenue	MA
	Suburban Residential Avenue	L C MA PA
	Suburban Residential Street	
C3 SC - Suburban Commercial		
	Boulevard	C MA PA
	Suburban Commercial Avenue	L C MA PA
C3 TC - Town Center		
	Urban Commercial Avenue	C MA PA
	Community Street	C MA PA
C4 - Urban General		
	Boulevard	C MA PA
	Urban Commercial Avenue	C MA PA
	Urban Residential Avenue	C MA PA
	Urban Residential Street	C MA
	Community Street	PA
C5 - Urban Center		
	Boulevard	C MA PA
	Urban Commercial Avenue	C MA PA
C6 - Urban Core		
	Urban Commercial Avenue	C MA PA

Quick- Build Intervention Matrix

Project Types	Street Types									
	RH	RR	B	SCA	SRA	SRS	CS	UCA	URA	URS
Placemaking										
Parklet							●	●		
Pedestrian Plaza			●	●	●	●	●	●	●	●
Intersection Mural			●	●	●	●	●	●	●	●
Walking										
Crosswalk (High Visibility)		●	●	●	●	●	●	●	●	●
Trail Crossing	●	●	●	●	●	●	●	●	●	●
Curb Extension			●	●	●	●	●	●	●	●
Pedestrian Safety Island	●	●	●	●	●	●	●	●	●	●
Walking Lane		●				●				
Bicycling										
Unprotected Bike Lanes					●	●	●	●	●	●
Protected Bike Lanes			●	●	●	●	●	●	●	
Neighborhood Greenway						●	●			●
"Super Sharrows"						●	●			●
Bicycle Parking Corral			●	●	●	●	●	●	●	●
Bike Box			●	●	●	●	●	●	●	●
Crossbike	●	●	●	●	●	●	●	●	●	●
Two-Stage Turn Box			●	●	●	●	●	●	●	●

Not every Quick-Build intervention is appropriate for every thoroughfare type and context. Similarly, some Complete Streets project elements do not lend themselves to the Quick-Build methodology. While not exhaustive, this matrix provides 23 potential Quick-Build interventions across five general project categories and identifies the thoroughfare types for which they are appropriate.

Note, even where project interventions are shown to be appropriate, a close review of actual existing conditions is required before implementing a Quick-Build project. For more complete guidance, visit www.nacto.org.

CS Thoroughfare Types + Context Zones

RH = Rural Highway [1](#) [2](#)

RR = Rural Road [1](#) [2](#)

B = Boulevard [3](#) [4](#) [5](#)

SCA = Suburban Commercial Avenue [2](#) [3](#)

SRA = Suburban Residential Avenue [2](#) [3](#)

SRS = Suburban Residential Street [2](#) [3](#)

CS = Community Street [2](#) [3](#) [4](#)

UCA = Urban Commercial Avenue [3](#) [4](#) [5](#) [6](#)

URA = Urban Residential Avenue [4](#)

URS = Urban Residential Street [4](#)

	RH	RR	B	SCA	SRA	SRS	CS	UCA	URA	URS
Surface Transit										
Modular Boarding Platform			●	●	●	●	●	●	●	●
Dedicated Bus Lane			●	●			●	●	●	
Bus Stop Amenities	●	●	●	●	●	●	●	●	●	●
Route Information Signage	●	●	●	●	●	●	●	●	●	●
Traffic-Calming										
Roundabout						●	●		●	●
Diverter						●				●
Chicane						●	●		●	●
Speed Cushion						●	●		●	●

CS Thoroughfare Types + Context Zones

RH = Rural Highway 1 2

RR = Rural Road 1 2

B = Boulevard 3 4 5

SCA = Suburban Commercial Avenue 2 3

SRA = Suburban Residential Avenue 2 3

SRS = Suburban Residential Street 2 3

CS = Community Street 2 3 4

UCA = Urban Commercial Avenue 3 4 5 6

URA = Urban Residential Avenue 4

URS = Urban Residential Street 4

Placemaking

Parklet



Rialto Bridge Parklet, Montpelier, VT. Photo: Unknown

Context Zone: 3, 4, 5, 6

Thoroughfare Type: CS, UCA

Parklets convert curbside parking spaces into usable public spaces. While parklets may be implemented on the street surface, they more commonly make use of a raised platform placed level with the curb/sidewalk. Public seating, landscaping, bicycle parking, and shade elements are a few of the amenities introduced into the streetscape, creating value for adjacent businesses and property owners along commercial corridors with moderate to heavy foot traffic.

Montpelier Parklet Program Montpelier, VT | Interim Design

This City program transforms underutilized asphalt space into additional public space. Each parklet is privately constructed and maintained for customers or the general public. Applicants within designated areas may submit an application directly to the City of Montpelier for review and approval.

Pedestrian Plaza



Rue Vendome Plaza, Miami Beach, FL. Photo: Andrea Lorena

Context Zone: 3, 4, 5, 6

Thoroughfare Type: All, except RH, RR

Pedestrian plazas increase street safety and foot traffic in commercial districts and residential areas, benefiting local businesses and supporting an environment in which community interaction can happen naturally. Plazas can be designed to normalize irregular and unsafe historic street geometries, increasing legibility and simplifying complex traffic patterns. Plazas can also create additional space for street furnishings, plantings, and other neighborhood amenities while providing the physical space for street murals where there is a strong community desire for aesthetic enhancements.

Rue Vendome Pedestrian Plaza Miami Beach, FL | Interim Design

This pedestrian plaza was a former nine-space parking lot located at the confluence of two high-volume streets in the North Beach commercial district. The City of Miami Beach painted and paved to enliven and delineate the space for ongoing community programming. Total materials cost approximately \$7,300.

Intersection Mural



Coxe Avenue Pilot Project, Asheville, NC. Photo: Justin Mitchell

Context Zone: 3, 4, 5, 6

Thoroughfare Type: All, except RH, RR

Intersection murals are a low-cost but high impact way for residents to add beauty and character to their neighborhood. Intersection murals are generally appropriate for low-traffic, low-speed streets but may be applied on busier thoroughfares in some instances. They may also be developed in conjunction with other Quick Build traffic-calming and placemaking projects to ensure vehicular speeds remain low.

Coxe Avenue “Street Tweaks” Pilot Asheville, NC | 1-Year Pilot Project

This block-long mural was a part of a corridor-scale pilot project designed to test out new complete street design elements - painted sidewalk extensions, micro-mobility lanes, crosswalks, bike boxes - in advance of a large capital project. Following a year of data collection, the project was shown to reduce overall vehicular speeds by 25%, while incidents of speeding dropped by 50%.

Walking

Crosswalk



Crosswalk-in-motion, Great Falls, MT. Photo: Street Plans

Context Zone: 2, 3, 4, 5, 6

Thoroughfare Type: All, except RH

High-visibility crosswalks use a variety of striping patterns, or contrasting pavement treatments, to significantly increase the visibility of a crosswalk to oncoming vehicular traffic. These should be applied to controlled and select uncontrolled intersections with known conflicts between vehicular and pedestrian movements, areas with high volumes of foot traffic (like commercial business districts, college campuses, employment hubs), at mid-block crossings, and along and across high-volume roads.

Complete Streets Workshop Great Falls, MT | Demonstration Project

Lightweight demonstration projects, such as the addition of high-visibility crosswalks can build local fluency with Quick-Build methods and materials. In this instance, 30 minutes and some free-standing delineators, traffic cones, and a roll of foil-backed traffic tape was all that was required to enhance street safety.

Trail Crossing



Pilot trail crossing, Bella Vista, AR. Photo: Street Plans

Context Zone: 1, 2, 3, 4, 5, 6

Thoroughfare Type: RH - URS

High-visibility trail crossings are very similar to the crosswalk treatment described above, with the key difference being that they are designed to include markings that reinforce a broader base of users, such as cyclists, equestrians, scooters, and skateboarders. Trail crossing design details may vary based on context.

BikeNWA Pilot Projects Bella Vista, AR | 1-Month Pilot

The use of contractor grade traffic tape was all that was needed to enhance an existing crosswalk linking two types of trails on either side of a low-volume rural road. This treatment was part of a much larger pilot project initiative across Northwest Arkansas that sought to improve connectivity to the 35-mile Razorback Greenway.

Curb Extensions



Pilot curb extensions, New Haven, CT. Photo: Street Plans

Context Zone: 3, 4, 5, 6

Thoroughfare Type: All, except RH, RR

Curb extensions shorten crossing distances, provide additional pedestrian waiting space, and calm traffic by physically narrowing intersections. This results in lower vehicular turning speeds and improves motorist sight lines at intersection and mid-block crossings. Curb extensions also offer an opportunity to create street surface murals, and are a form of public space that may become permanent, providing additional opportunities for environmental and placemaking enhancements.

Safe Routes for All Curb Extensions New Haven, CT | Pilot Project

In the summer/fall of 2019, a series of 27 colorful curb extensions at six intersections were implemented across the city by municipal staff, volunteers, and a consultant team. Each installation was designed to do two things: 1) engage and inform the public about the broader Safe Routes for All Master Plan, and 2) pilot test materials and a process for city-citizen collaboration.

Pedestrian Safety Island



Pedestrian safety island, Brooklyn, NY. Photo: Street Plans

Context Zone: 1, 2, 3, 4, 5, 6

Thoroughfare Type: All

Pedestrian safety islands are physically protected areas within the street that give pedestrians a safe and visible place to wait. At signalized intersections, they allow pedestrians to cross the street in two phases, which is especially helpful for seniors, childrens, and individuals with disabilities. At unsignalized intersections, they relieve pedestrians of the stress of finding a gap in traffic to cross multiple vehicular travel lanes. In more rural applications, pedestrian islands may be used at trail crossings to help calm traffic.

Pedestrian Safety Island Brooklyn, NY | Interim Design

This pedestrian refuge island was created using rubber, modular curbing at the intersection of two major arterial streets in downtown Brooklyn where existing infrastructure below grade made it challenging to install a more permanent concrete curb solution.

Walking Lane



Razorback Greenway connection, Bella Vista, AR. Photo: Walton Family Foundation

Context Zone: 2,3

Thoroughfare Type: RR, SRS

High-visibility trail crossings are very similar to the crosswalk treatment described above, with the key difference being that they are designed to include markings that reinforce a broader base of users, such as cyclists, equestrians, scooters, and skateboarders. Trail crossing design details may vary based on context.

BikeNWA Pilot Projects Bella Vista, AR | 1-Month Pilot

In Bella Vista, a pedestrian walking lane was built adjacent to a two-way bike lane linking two trail heads through a large parking lot. This treatment was part of a much larger pilot project initiative across Northwest Arkansas that sought to improve connectivity to the 35-mile Razorback Greenway.

Bicycling

Unprotected Bike Lanes



Bike lane demonstration, Nyack, NY. Photo: Street Plans

Protected Bike Lanes



"Hands on Exchange, pilot project, Akron, OH. Photo: Street Plans

Context Zone: 1, 2, 3, 4, 5, 6

Thoroughfare Type: B - URS

Bike lanes designate an exclusive space for cyclists in the right-of-way, typically adjacent to vehicular traffic, through the use of pavement markings and signage. Bike lanes generally appeal to moderate or skilled cyclists, but will not encourage timid or beginner cyclists to ride because the level of traffic stress remains unappealing. Unprotected bike lanes include conventional, buffered, and contra-flow lanes.

Context Zone: 2, 3, 4, 5, 6

Thoroughfare Type: B - URA

Protected bike lanes are physically separated from vehicular traffic using a variety of methods, such as raised curbs, delineators, bollards, parked cars, or other barriers like planters or concrete barriers. Like shared use paths, protected bike lanes enhance the perceived and real safety for the widest swath of people of all ages and abilities, which encourages more people to ride with confidence.

Curbside Bike Lane

Nyack, NY | Demonstration Project

A demonstration bicycle lane was created for an in-town Earth Day festival. The "pop-up" lane served as a platform to conduct further public outreach for the Nyack Bicycle and Pedestrian Master Plan. The lane was created using low-cost materials like using foil-backed traffic tape, stencils, and white tempera paint.

Hands On Exchange

Akron, OH | Interim Design

The City of Akron partnered with the University of Akron to implement a protected, two-way bike lane, painted by community volunteers with acrylic traffic paint. Flexible delineator posts were used to keep motorists out of the bike lane and to enhance a sense of vertical separation. The purpose of the project was to fill a gap in the city's off-street trail network and to test design elements in advance of a capital street reconstruction project.

Neighborhood Greenway



Old North End neighborhood greenway, Burlington, VT. Photo: Street Plans

Context Zone: 3, 4

Thoroughfare Type: SRS, CS, URS

Also called “bicycle boulevards”, Neighborhood Greenways provide low-stress bicycle routes along local streets, characterized by slow travel speeds and low vehicle volumes. Neighborhood Greenways feature many traffic-calming tools, including, but not limited to, mini roundabouts, chicanes, pinch points, curb extensions, etc. Directional markings and wayfinding provide bicyclists with legible routing. Sometimes motor vehicle traffic is even limited to local access only, which helps prioritize thru-movement for people walking and cycling.

Burlington Quick Build Program Burlington, VT | Interim Design

The City of Burlington’s North End Neighborhood Greenway was built using the city’s new Quick-Build design and material standards, a companion implementation guide for the WalkBikeBTV Master Plan. Materials include wayfinding signs, planter and delineator-protected bike lanes, and a variety of intersection and mid-block traffic-calming treatments.

“Super Sharrows”



A neighborhood greenway “super sharrow.” Photo: Walton Family Foundation

Context Zone: 2, 3, 4

Thoroughfare Type: SRS - CS, URA - URS

Super sharrows are a pavement marking used to indicate a shared lane for people bicycling and people driving. Like regular shared use lane markings (“sharrows”), super sharrows should not be considered a substitute for dedicated bike infrastructure, such as bicycle lanes or protected bikeways. However, the two parallel dashed line markings are intended to emphasize cyclist priority along designated neighborhood slow zone / neighborhood greenway streets where bicycle lanes may not be warranted.

BikeNWA Pilot Projects Rogers, AR | 1-Month Pilot

In Rogers, “super sharrows” were installed in the center of the right-of-way along a Neighborhood Greenway route to both emphasize bicyclist placement and to reduce thru traffic speeds. This treatment was part of a much larger pilot project initiative across Northwest Arkansas that sought to improve connectivity to the 35-mile Razorback Greenway.

Bicycle Parking Corral



Bike corral, New York City. Photo: New York Post

Context Zone: 3, 4, 5, 6

Thoroughfare Type: B - URS

Bike corrals typically repurpose one curbside vehicular parking space to accommodate 8-12 bicycle parking spaces. Corrals may also be installed within site visibility triangle zones. Bike corrals help reduce haphazard or oversubscribed sidewalk bike parking that often interferes with pedestrian access. Increased bike parking has been shown to have positive impacts on adjacent retail businesses, who benefit from increased parking, activity, and customer convenience.

NYC DOT Bike Corrals New York, NY | Interim Design

Businesses, community groups, and/or individual volunteers can apply for a bike corral, a great solution for places where sidewalk space limits the provision of bike racks, and an opportunity for street beautification. Inexpensive planters, racks, and delineators and some striping is all that is needed to add convenient parking to any neighborhood main street.

Bike Box



Coxe Avenue Bike Box, Asheville, NC. Photo: City of Asheville

Context Zone: 3, 4, 5, 6

Thoroughfare Type: B - URS

A bike box is a designated area at a signalized intersection that provides bicyclists with a safe and visible way to get ahead of automobile traffic during the red signal phase. Also known as an advanced stop line, these simple and low-cost treatments increase bicyclist visibility, allow bicyclists better positioning for left- or right- turns, prevent vehicles from encroaching into the crosswalk space, and help prevent right-turn conflicts between bicyclists and turning motorists.

Coxe Avenue “Street Tweaks” Pilot Asheville, NC | 1-Year Pilot Project

Bike boxes and many other complete street design interventions were installed along Coxe Avenue in advance of a planned capital reconstruction project. Following a year of data collection, the project was shown to reduce overall vehicular speeds by 25%, while incidents of speeding dropped by 50%.

Crossbikes



Crossbikes, Providence, RI. Photo: Street Plans

Context Zone: All

Thoroughfare Type: All

Crossbike markings designate the continuation of a bicycle facility across an intersection or any areas of potential conflict from cross-traffic such as driveways or bicycle thru lanes. Crossbike markings also help reinforce cyclists' and motorists' lateral placement through the intersection, effectively making cycling facilities visible where people bicycling are most vulnerable.

City Walk Providence, RI | Demonstration Project

City Walk is a multi-phase planning initiative linking nine Providence neighborhoods with new bicycle and pedestrian facilities. A weeklong demonstration project was implemented to preview proposed improvements and to gather input from southwest Providence residents. Plazas, curb extensions, and a two-way protected bike lane were installed to showcase the safety and placemaking elements of the project. As of Fall 2019, the first 1.5 miles were being implemented using interim materials.

Two-Stage Turn Box



Two-stage turn box, Jersey City, NJ. Photo: Street Plans

Context Zone: 3, 4, 5, 6 Thoroughfare Type: B - URS

A two-stage left-turn queue box provides people cycling the visible option to make safe, comfortable left turns in two stages at multi-lane signalized intersections. This reduces the need for a demanding 'look over the left shoulder and turn' maneuver. Two-stage left-turn queue boxes can improve bicyclist's visibility, and create a formal queuing space for bicyclists, reducing conflicts between travel lanes, thru-bike lanes and crosswalks.

Washington Boulevard Quick-Build Jersey City, NJ | Interim Design

Alongside the adoption of the city's first citywide bicycle master plan, Jersey City implemented five miles of protected lanes over the summer of 2019. The bike lanes made use of interim, "Quick-Build" materials to minimize cost and maximize flexibility so that future projects could be informed by the success and challenges associated by the first round of projects.

Surface Transit

Modular Boarding Platform



Modular bus boarding platform, Los Angeles, CA. Photo: LA DOT.

Dedicated Bus Lane



Mt. Auburn Avenue Bus Lane, Cambridge, MA. Photos:

Context Zone: 2, 3, 4, 5, 6

Thoroughfare Type: B - SCA,
CS - UCA

Platform-level boarding can speed transit service by reducing dwell and boarding times, and allowing buses to remain in the travel lane to stop. Customizable, modular boarding platforms manufactured by the Spanish brand Zicla are increasingly being used by cities all over the world to address speed and reliability, and multi-modal access to bus service.

Context Zone: 2, 3, 4, 5, 6

Thoroughfare Type: B - SCA,
CS - UCA

Bus lanes are curb-side lanes dedicated solely to public bus travel. Dedicated bus lanes are typically applied on major bus route corridors, with 10-minute peak headways, or where vehicular traffic congestion may significantly limit reliability. Bus lanes can either be located against the curb, or take the place of the right-most travel lane between the parking lane and the other travel lanes. Bus lane width depends on the availability of space in the thoroughfare, but the minimum width of a curbside bus lane is 11 feet, and the minimum width of an offset bus lane is 10'.

Dept. of Transportation Platforms Los Angeles, CA

In order to facilitate in-lane boarding and alighting, the Los Angeles Department of Transportation has begun installing modular bus boarding platforms. At scale, these small interventions can increase the speed and reliability of bus transit while also integrating protected bike lane infrastructure (see left). The platforms are entirely modular, removable and customizable.

BostonBRT Bus-Only Lanes Cambridge/Watertown, MA | Pilot Projects

Funded by the Barr Foundation, the BostonBRT program provides resources and technical assistance to municipalities that are ready to test BRT elements, like dedicated transit lanes and signal prioritization. Initial projects have been shown to increase speed, reliability, and ridership, as well as to result in more permanent improvements.

Bus Stop Amenities



Bus parklet, Solano, CA. Photo: ???

Context Zone: 1, 2, 3, 4, 5, 6

Thoroughfare Type: RH - URS

Bus stop amenities can take many forms, but often times the largest barrier to increasing ridership is a lack of comfort waiting for and riding the bus. Elevating the experience of riding the bus through the provision of seating, shade and protection from other elements, greenery, and public art can make a big difference. Bus stop parklets, for example, can accomplish this and potentially address speed and reliability issues by functioning as boarding platforms.

Solano Avenue Bus Parklet Albany, CA | Pilot Project

This bus stop parklet was designed in partnership with a local business, and provides a comfortable and ADA-accessible way to wait for and board the bus. Design guidelines for bus stop parklets have since been created to apply the lessons learned at other locations.

Route Information Signage



New bus transfer signs, Miami, FL. Photo: Street Plans

Context Zone: 1, 2, 3, 4, 5, 6

Thoroughfare Type: RH - URS

Transit stop (bus, rail, streetcar, etc.) wayfinding and signage can be inadequate, or entirely lacking. Quick solutions, using materials like thick coroplast or PVC can provide interim signage for at least six months. Not being able to understand a transit network can be detrimental to ridership numbers, and deter potential riders from choosing transit over motorized transportation options.

MDT Quick-Build Program Miami-Dade County, FL | Pilot Projects

The Miami-Dade Quick-Build program was established to test a wide range of public transportation, public space, and first mile/last mile improvements. Some projects were as simple as adding temporary signage along a City of Miami trolley route to highlight where riders can board and transfer to other transit lines.

Traffic Calming

Roundabout



Testing a mini roundabout, Long Beach, CA. Photo: Street Plans

Context Zone: 2, 3, 4

Thoroughfare Type: SRS, CS, URA, URS

Roundabouts, mini-roundabouts, and neighborhood traffic circles* simplify vehicle turning movements and lower vehicle speeds at uncontrolled intersections. These traffic-calming facilities can improve safety, air quality, and reduce noise pollution. They can be installed using road markings, and vertical quick-build elements. In the long-term, the implementation of permanent roundabouts or neighborhood traffic circles offer opportunities to beautify streets through greenery and/or artistic installations.

SCAG Go Human Program Southern California | Demonstration Projects

The Southern California Association of Governments Go Human program is a community outreach and advertising campaign with the goals of reducing traffic collisions in Southern California and encouraging people to walk and bike more. The program includes multiple demonstration and quick-build projects across the SCAG region, including bikeway, pedestrian, placemaking, and traffic-calming treatments.

Diverter



Neighborhood greenway traffic diverter. Photo: Walton Family Foundation

Context Zone: 2, 3, 4

Thoroughfare Type: SRS, URS

Diverter are traffic-calming measures that create physical barriers designed to control movement of traffic in a particular direction, and can be used to prevent people driving from entering or exiting certain legs of an intersection. There are many diverter types, but all should be applied to primarily low-volume residential thoroughfares where traffic calming measures are still deemed necessary. Diverter are a common treatment used to reduce cut-through traffic along Neighborhood Greenways, or streets where residents desire to minimize through traffic.

BikeNWA Pilot Projects Bentonville, AR

In Bentonville, diverters were installed to reduce cut-through traffic on along the pilot Neighborhood Greenway route. Planters functioned both as physical protection and beautification for each diverter. This treatment was part of a much larger pilot project initiative across Northwest Arkansas that sought to improve connectivity to the 35-mile Razorback Greenway.

* For a good discussion on the technical differences, visit: <https://www.wsdot.wa.gov/Safety/roundabouts/BasicFacts.htm>

Chicane



North Minneapolis Neighborhood Greenway, Minneapolis, MN. Photo:Our Streets MPLS

Speed Cushion



Alameda, CA Photo: Clarence Eckerson, Jr.

Context Zone: 2, 3, 4, 5

Thoroughfare Type: SRS, CS, URA, URS

Chicanes are offset curb lines that introduce lateral shifts to travel lanes, creating a 'slalom effect' that can reduce vehicular speeding along residential or downtown streets. Chicanes can also provide an opportunity to introduce public art or other street enhancements, like planters and on-street bicycle parking. Low-cost chicanes may be created along narrow streets with only one parking lane by alternating the location of the parking.

Context Zone: 3, 4, 5

Thoroughfare Type: SRS, CS, URA, URS

Speed cushion are parabolic vertical traffic calming devices intended to slow traffic speeds on low volume, low speed roads. They may be designed to allow vehicles with large wheelbases, like fire trucks, to travel unimpeded. Speed cushions may be implemented with asphalt or with a bolt down rubber product that may be removed or adjusted more easily.

North Minneapolis Greenway Minneapolis, MN | Pilot Project

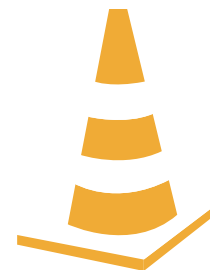
In 2016, the Minneapolis Department of Health Department and Public Works installed a year-long temporary greenway on five blocks of the proposed north Minneapolis greenway route and conducted an extensive evaluation of the project. The temporary greenway tested three different designs. While design preferences varied, the majority of residents (73%) indicated that they would like a greenway installed on their streets.

Alameda County Traffic-Calming Program, Alameda, CA

The Alameda County Neighborhood Traffic Calming Program offers a set of traffic calming guidelines and interventions for local and collector streets that involve traffic engineering practices, neighborhood involvement, education, and physical measures to help relieve the negative impact of vehicles on residential neighborhoods. Some interventions may be temporary or interim in nature to gauge effectiveness.



This bus stop parklet was designed to celebrate bus riders in New Haven, CT. Photo: Street Plans



Let's Get Started!

From choosing a project site, to project design, and materials selection and budgeting, this chapter outlines 10 core steps for developing and implementing a Complete Streets Quick-Build project.

Project Planning

- 1 CHOOSE A PROJECT SITE + DEVELOP PROJECT CRITERIA
 - 2 ASSEMBLE AN INCLUSIVE PROJECT TEAM
 - 3 ENGAGE YOUR COMMUNITY
 - 4 DEVELOP A COMMUNICATION + MARKETING PLAN
 - 5 DETERMINE YOUR BUDGET
 - 6 DESIGN THE PROJECT + SELECT YOUR MATERIALS
 - 7 ESTABLISH A MAINTENANCE + REMOVAL PLAN
 - 8 CREATE A 'BUILD DAY' PLAN
 - 9 EVALUATE YOUR PROJECT
 - 10 SHARE PROJECT RESULTS!
-

1 CHOOSE A PROJECT SITE + DEVELOP PROJECT CRITERIA

Getting projects implemented is the essence of the Quick-Build methodology. But first you need to select a project site. Depending on project goals and resources, candidate sites may include some length of a transportation corridor, one or more intersections, or even just a parking space, street corner, or bus stop in need of safety, functional, or placemaking improvements.

No matter the scale, start by determining project goals and criteria (see a sample on page 30) and considering need-based locations. What corridors or intersections in your community suffer from the most traffic crashes? Where is bicycle parking chronically oversubscribed? Where do the number of vehicular travel lanes exceed motorists' travel demand? Where has a crosswalk been requested by residents for years but never installed?

Commercial corridors or neighborhood streets that have adjacent, engaged business or resident groups are great candidates for a Quick-Build project. Similarly, projects that have been publicly vetted and prioritized through a formal planning process but that lack long-term capital funding also provide a good option. Indeed, many successful Quick-Build projects are implemented with an organized consortium of citizen volunteers, government agencies, non-profits, and political officials that pool resources and talent. That said, don't be timid. Quick-Build projects are especially well-suited for need-based locations that *do not* have universal support or awareness from stakeholders. Rather than debate the merits of a plan on paper, the Quick-Build project *becomes the proposal* for people to evaluate. So be bold and try new ideas, as the Quick-Build method allows you to reverse them later!

Example Project Criteria



CONNECTIVITY

How well does the project improve pedestrian and non-motorized connectivity?



MATERIALS

What kind of materials will meet the project duration/durability goals?



VISIBILITY

How well does the project create visual recognition from passersby?



COMPLEXITY

How complex are the installation logistics? Does the budget align?



SAFETY

How much does the project improve street safety?



PUBLIC ENTHUSIASM

Does the project relate to a recent master plan, or is there other public support?



LOCAL BUSINESSES

How well does the project support existing retail, or attract new tenants?



PARTNERSHIP

Have possible partners been identified?



COST

How much of an investment will the project be in labor, design, installation?



STEWARDSHIP

How complex is the maintenance of the project? Is there a steward with capacity?

2 ASSEMBLE AN INCLUSIVE PROJECT TEAM

The design and delivery of Quick-Build projects can be handled by municipal staff - departments of planning, public works, engineering and the like - or be germinated from grassroots, community, or business group initiatives. But no matter who leads, building a team of collaborators with clear roles and responsibilities helps deliver a successful project. On the municipal side, finding a political and/or departmental staff champion will be crucial to project success; as will assembling a consortium of local stakeholders: residents, business owners, community organizations who support the project. Such groups may help identify and turn out volunteers, provide a sounding board for vetting project ideas, and better leverage local resources to deliver projects that support the needs and interests of their community.

No matter who is involved, the project team will need to meet regularly throughout the design and implementation process and would do well to make sure a variety of skillsets are represented on the project team; from urban design and engineering, to communication and marketing, to artists and makers, and fundraisers.

3 ENGAGE YOUR COMMUNITY

At the regional scale, the same communication and engagement channels used for typical planning processes can be activated for promoting the Quick-Build process to CRCOG's 38 member cities. At the local level, public engagement needs will vary depending on the project type, location, and duration. Typical methods include design workshops, door-to-door outreach, intercept and/or public life surveys etc. Where the public fears change, make sure to emphasize that Quick-Build projects are meant to be tests for the purpose of implementing infrastructure quickly, but also evaluating them to make improvements over time, or in the case of major project shortcomings, removal.

All of that said, the largest opportunity for public engagement comes in the actual physical delivery of the project. Painting the streets and installing other Quick-Build elements is a great outlet for community participation and builds a level of buy-in that is not able to be achieved through the conventional planning process. It also serves as a major prompt for passersby to stop and engage in the project. So move forward with confidence that community engagement in the project planning stage is important, but that the act of implementation often serves as the wider platform for communitywide engagement.



Southern Connecticut State University Student's were instrumental in the delivery of a large-scale demonstration project in New Haven, CT. Photo: Street Plans.



Print and digital media, as well as social networks should be leveraged to communicate project details clearly and consistently, as well as to build awareness, excitement, and your roster of volunteers.



4 DEVELOP A COMMUNICATION + MARKETING PLAN

Quick-Build projects are not an end unto themselves, but are often utilized to provide important feedback loops within a long-term planning process. That said, the iterative approach used for project delivery typically brings challenges from two sides:

- Not realizing that project design and materials are flexible, some people will worry the project is moving too fast, not allowing for adequate public input.
- Other people will worry that rapid-implementation of projects with low-cost materials is an excuse for not investing in robust capital upgrades.

As such, it is important to create a plan for marketing and outreach that clearly communicates:

- What need/challenge the project aims to address;
- How long a project will be in place;
- How the project will be evaluated; and
- To what degree it can be adjusted (or removed) in response to community feedback.

Any good communications plan should be executed with support from stakeholder groups, local politicians, and nearby property owners (residents, business owners, etc.) and helpful tactics include creating an attractive logo or brand for the project, as well as a “promo kit” to outline key talking points, making it easy for partners to share information across various community and digital networks.

5 DETERMINE YOUR BUDGET

The scale and scope of any Quick-Build project is determined by two primary factors: available financial and human capital. Resource accounting early in the process will help your project team understand how large the project can be and for how long can it last. Materials selection, the number of volunteers needed, partner roles, maintenance requirements etc. will then become more clear.

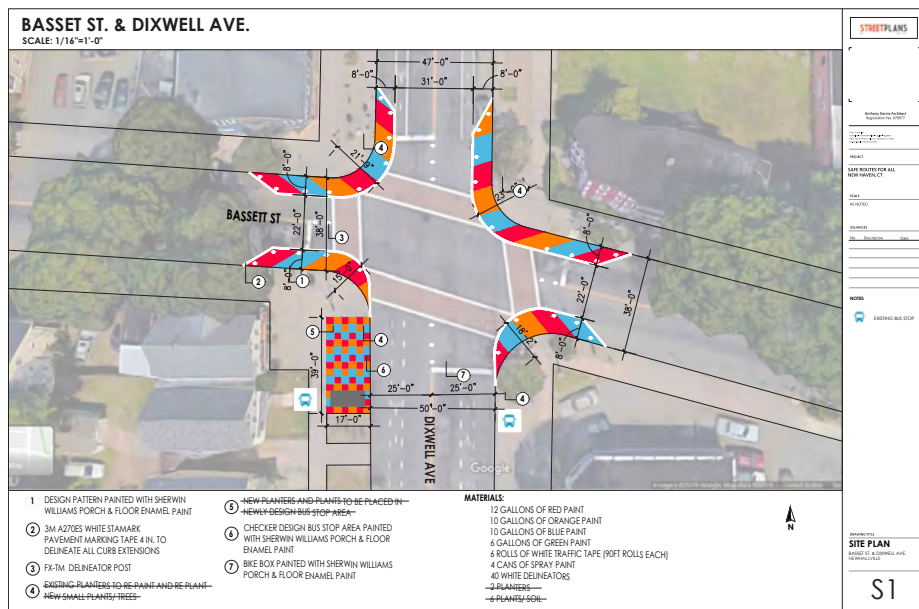
While it’s true that Quick-Build projects typically cost a fraction of more permanent infrastructure, most traditional government funding sources are not yet aligned with this nimble approach to project delivery. So where will the money come from? Many of the examples highlighted in this Guide applied a mix of existing government planning or engineering budgets and created partnerships with trusted non-profits, foundations, and/or community or business groups (such as special assessment districts / business improvement districts) to fund project design, build-out, and maintenance/stewardship. Non-profit community groups and other community partners are often able to access / source additional financial or human capital (time, talent etc.) and can use leading crowd-resourcing platforms like ioby that can be leveraged for matching foundation grants.

6 DESIGN THE PROJECT + SELECT MATERIALS

Design

In the quest to make rapid complete streets improvements come to life, it’s important to underscore the need for flexibility during the design process. Quick-Build projects are great opportunities to test out of the box solutions that lead to viable new forms of community engagement, material use, and street design. As such, Quick-Build projects should be designed in response to hyper-local conditions (physical, social, economic etc.) and always meet or exceed basic life safety standards. That said, Quick-Build projects should also look to advance a replicable, scalable approach to challenges that exist not only at the local level but across the Hartford region.

Typical Quick-Build projects include two major design deliverables: a site plan and a materials plan. In other words, what are you doing and where, and what will it be made of? During the design process, proponents can expect at least 2-3 rounds of city revisions before



An annotated site plan for the delivery of colorful curb extensions and a bus stop enhancement in New Haven, CT. Photo: Street Plans

the plan is finalized while also expecting that minor adjustments will be made in the field as you move your design work from pixel to pavement.

Materials

Selecting project materials will require ongoing collaboration between city staff and stakeholder agencies, neighborhood groups, business organizations, advocacy organizations, and local artists/fabricators. The collaborative process ensures both the design and materials are not only contextual, but in line with community capacity and feasible for the intended project duration.

Once materials are selected, know that each municipality has unique procurement rules and processes. In some instances this presents no issue while in others it can be a major barrier to moving forward in a timely manner. In the case of the latter, it's faster and easier to work with a non-profit or foundation partner to acquire materials, as they typically have fewer procurement hoops to jump through. In some cities or regions, a public "library" of materials exist and may be deployed to different municipalities via mobile trailers or containers. This reduces procurement costs and can help a regional organization like CRCOG take Complete Streets "on the road."

New Haven Demonstration Project										
File Edit View Insert Format Data Tools Add-ons Help Add changes saved in Office										
Category	Category	Description	Item	SQ. FT./ LF.	Total Quantity Required	Unit cost	Est. Total Cost	Link	Delivery Location	Notes/Questions
Curb Extensions	Paint	Sherwin Williams Porch & Floor Enamel (Color Real Red SW686)	REAL RED 12 GALLONS	1200 SF	12		\$0	https://www.sherwin.com/		Unit cost are est. because of color selection and business account with the City of NHV
	Paint	Sherwin Williams Porch & Floor Enamel (Color Jacaranda SW6802)	JACARANDA 10 GALLONS	1000 SF	10		\$0	https://www.sherwin.com/		Unit cost are est. because of color selection and business account with the City of NHV
	Paint	Sherwin Williams Porch & Floor Enamel (Color Naval SW6897)	NAVAL 10 GALLONS	1000 SF	10		\$0	https://www.sherwin.com/		Unit cost are est. because of color selection and business account with the City of NHV
	Traffic Tape	3M AZ70ES White Starmark™ Pavement Marking Tape - 4' x 30 yds	90 R roll	501 LF	6	\$197	\$1,182	https://www.3m.com/		EACH ROLL IS 99 R LONG PROVIDED BY CITY OF NHV
Curb Extensions	Delineators	Flex Stakes			40	\$0	\$0	https://www.kwikoncrete.com/		
					4 carts					
Signs							\$1,182			
Signs							????			
Misc Materials							\$0			
							\$300.00			
RETURNS										
RETURNS										
SUBTOTAL Materials							\$1,682			

A detailed materials sheet with estimated quantities, cost, etc. Photo: Street Plans



The Southern California Association of Governments maintains a deployable “pod” of materials to support the “Go Human” Tactical Urbanism program. Photo: Street Plans

7 CREATE A MAINTENANCE + REMOVAL PLAN

Building a new project - any project - is more exciting than maintaining an existing one. But without a maintenance plan, a shiny new Quick-Build project can become an eyesore and threaten community support for long-term change. So while Quick-Build projects can deliver benefits fast, lower-cost materials may require more frequent maintenance (e.g. replacing delineator posts, refreshing paint). For longer-term projects (say three years in duration or more) communities should monitor the materials maintenance and performance costs so that project data informs when the use of capital budget funds / more permanent materials makes the most fiscal sense.

Not every project will require a detailed maintenance plan. But where applicable, project leaders should always consider the maintenance / stewardship costs by developing a clear plan and an agreement/MOU outlining roles and responsibilities. Many examples can be found in the plaza and parklet programs proliferating across the country, but the exact agreement structure will depend on your community, program details, permit process, partners, and approach to liability.

Finally, not all Quick-Build projects are a smashing success. While it's rare for a project to be removed entirely before the intended duration is met, some project elements may be deemed ineffective or lack political support. Thus, project leaders should develop a project removal plan that includes clear steps for altering or removing the project, and include the cost of restoring the project site to its previous condition.

8 CREATE A 'BUILD DAY' PLAN

Upon completing the site and materials plan, there are multiple other steps, or "small plans," that need to be advanced. Each aspect of what is often referred to as the 'build day' plan is described briefly below.

A) Permits - Depending on your project type and the duration, one or more permits may have to be obtained from the city. If the project is fully supported or led by a city agency then the permits are often easier/faster to pull.

B) Maintenance of traffic plan - If project implementation requires partial or full closure then you'll likely have to show how vehicular traffic (including deliveries and school/city bus routes) will be temporarily



A simple traffic control plan submitted to the City of New Haven in advance of the implementation of a intersection-scale Quick-Build project. Photo: Street Plans



A simple traffic control plan submitted to the City of New Haven in advance of the implementation of a intersection-scale Quick-Build project. Photo: Street Plans

rerouted to allow for project implementation. These plans basically require alternate routing to be shown on a map and where detour and warning signs/flaggers will be located to alert the traveling public.

C) Site preparation plan - To ensure the successful application of materials (paint, adhesives etc.) street cleaning, sweeping, raking, or powerwashing may be required. With city support many of these tasks can be handled by public works crews or contractors, or taken on by volunteers during the 'build day'

D) Materials staging plan - Knowing where to ship and store project materials, as well as how they will be transported and staged onsite for implementation is a key logistical detail that cannot be overlooked. Often times this is best handled by creating one or more physical project hubs where materials can be accessed as close as possible to their installation point.

E) Project schedule / run-of-show - Project schedules are never adhered to 100% of the time but it's still important to have a road map for how/when major project installation activities will occur. The project schedule should also include a foul weather plan/ alternate dates for project implementation.

F) Volunteer management plan - Having too many volunteers show up is as almost as bad as not having enough. Thus, it is worth the time to carefully think through how many tasks are appropriate for volunteers and the approximate amount of time required. On larger projects scheduling volunteers in shifts can keep energy high and reduce the need to manage idle hands.

G) Supportive programming plan - For some projects, particularly those oriented around improving/adding public space, supportive programming can draw a lot more people and build project support.

H) Project clean up plan - Whether the project requires a few hours or a few weeks to install, any clean up plan should instill a Leave No Trace (other than the project!) ethos and make sure that whenever possible project waste is recycled and disposed of properly.

I) Evaluation plan - Metrics of success will be unique to each project, but should be established before project implementation so that all parties are clear on the project's objectives, and



Advanced coordination with New Haven's Department of Transportation ensured trained professionals could properly install vertical delineators while volunteers painted curb extensions and crosswalks.
Photo: Street Plans

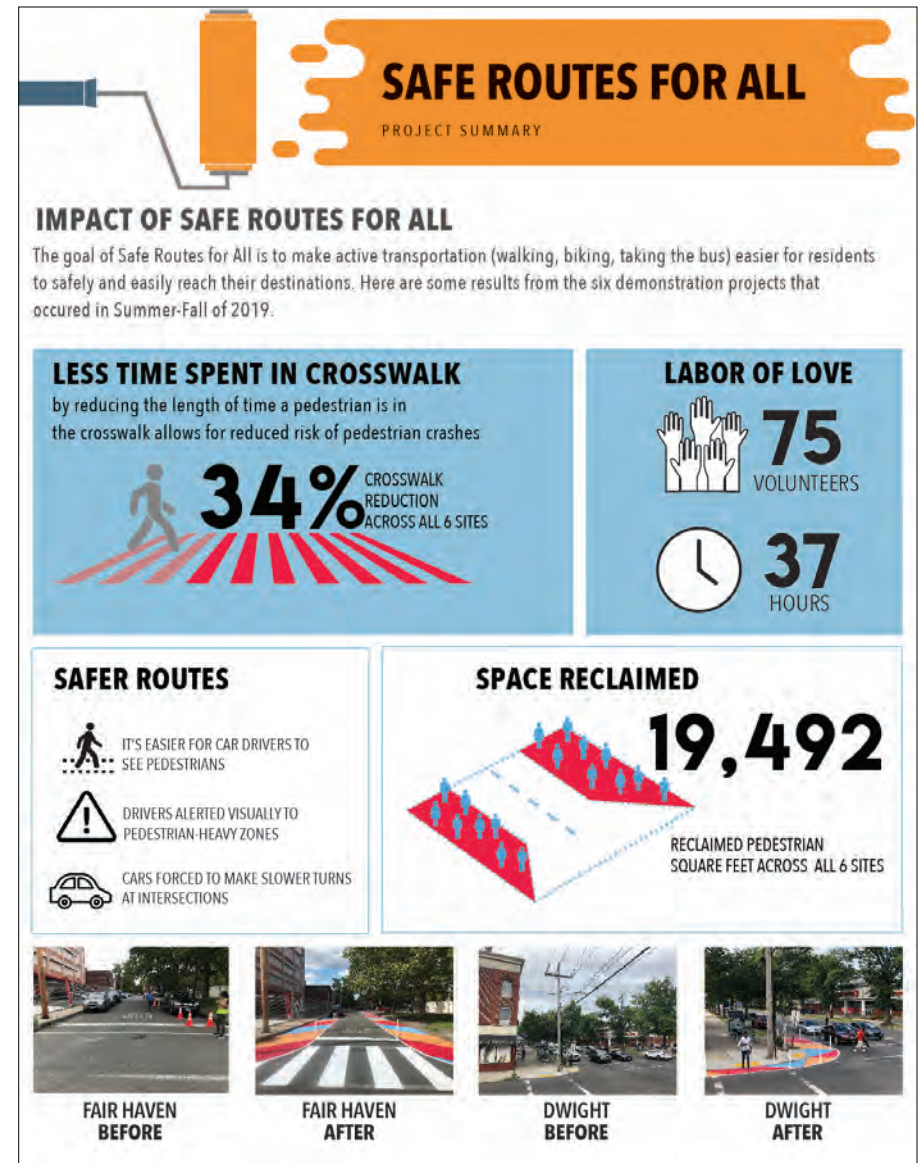
how the project team will be able to determine if a project could be improved or iterated upon. Determining such objective, metrics, and methods for quantitative and qualitative data collection ahead of project implementation allows any pre-evaluation or baseline data to be collected and physical evaluation methods to be installed during the project build (cameras, screenlines, etc.) so that evaluation activities (see below) can happen from day one. Finally, a key element for any evaluation plan is to establish clear roles in regards to which entity is leading evaluation efforts and for how long such activities will take place.

9 EVALUATE YOUR PROJECT

Building on the goals outlined at the outset of the project and the evaluation plan, ongoing evaluation efforts will help track project performance. Expect that the project design, as well as the project evaluation methods, might need to be tweaked once installed — with flexible materials and evolving political realities, adjustments in the field are part of the design process! Most evaluation activities require a mixture of automated and analog approaches so it's critical that project partners know their role and conduct their evaluation work consistently. For robust evaluation efforts, partnerships with universities or other contractors are often utilized.

10 SHARE PROJECT RESULTS!

Finally, undertaking proper evaluation is necessary to not only inform government and community leaders of the success and/or shortcomings of a project, but any successes and lessons learned are crucial to share in building continued political and public support and momentum for the application of the Quick-Build methodology to advance Complete Streets. Thus, project teams should set a timeline for completing the evaluation work and in what form and where those results will be shared. For most, legible infographics are the most digestible form, as most people will not dig into reams of spreadsheet data just to find the highlights. Finally, when sharing project results make sure to target local and regional news media, project partners, making clear what was evaluated and how it relates to project objectives and goals.



While project performance requires months or years of data collection, the physical and community impact can be quantified almost immediately. Graphic: CARE

Additional Resources



Quick Builds for Better Streets People for Bikes

This publication highlights nine keys to successful Quick-Build projects, like putting together an inter-agency team, executing public outreach and messaging, contracting services, and measuring and evaluating the performance of Quick-Build projects.



Separated Bike Lane Planning and Design Guide Federal Highway Administration

Whether the project is a pilot, interim design, or permanent, best practices in bicycle infrastructure design should be used. FHWA's guide to planning and designing separated bike lanes contains the minimum standards for these facilities.



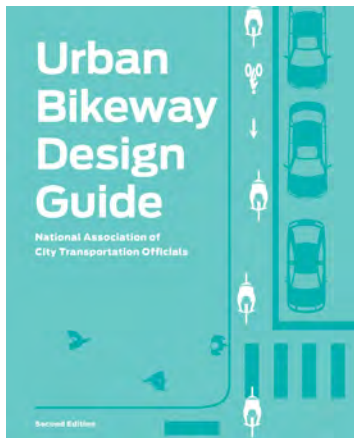
Tactical Urbanist's Guide to Materials and Design, V. 1 (Vol. 2 forthcoming) Street Plans

This free to download publication contains detailed guidance on the planning and execution of Tactical Urbanism projects, like materials spec sheets and programming ideas.



Quick Build Design + Materials Standards Burlington Public Works

This publication has been guiding the City of Burlington's implementation of its Quick Build Program, and contains both design and materials guidance.



NACTO Urban Bikeway Design Guide

This publication provides cities with state-of-the-practice solutions that can help create complete streets that are safe and enjoyable for bicyclists.



NACTO Urban Street Design Guide

The Urban Street Design Guide charts the principles and practices of the nation's foremost engineers, planners, and designers working in cities today, and outlines both a clear vision for complete streets and a basic road map for how to bring them to fruition. It also offers some guidance on so-called "quick-build" design solutions.



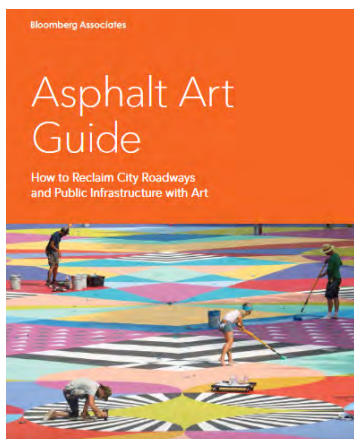
NACTO Transit Street Design Guide

This guide provides specific design guidance for the development of transit facilities on city streets, and for the design and engineering of city streets to prioritize multi-modal transit, improve service quality, and support other goals related to complete streets.



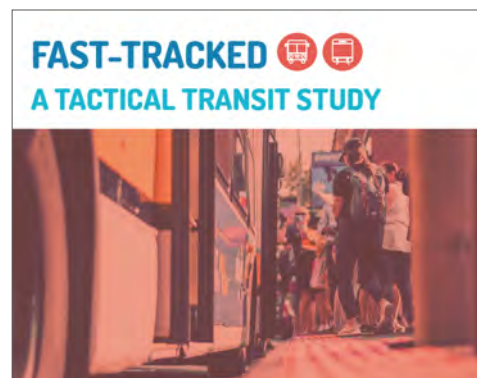
City of San Francisco Planning Public Space Stewardship Guide

A collaborative effort between San Francisco Planning, Street Plans, and the MJM Management Group, this guide presents 17 case studies organized around five categories for the funding, programming, and maintenance of public space.



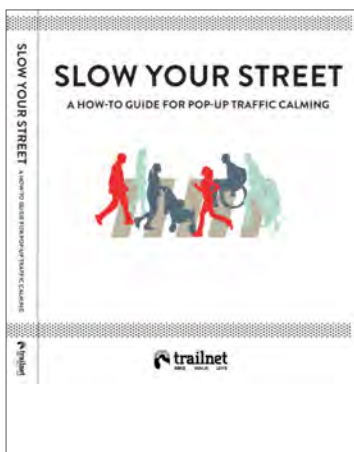
Asphalt Art Guide

Published in 2019 by Bloomberg Philanthropies and Street Plans, this guide contains case studies and detailed how-to tips for the implementation of asphalt art. Case studies span the following categories: asphalt art in the roadway, pedestrian space, and on vertical infrastructure.



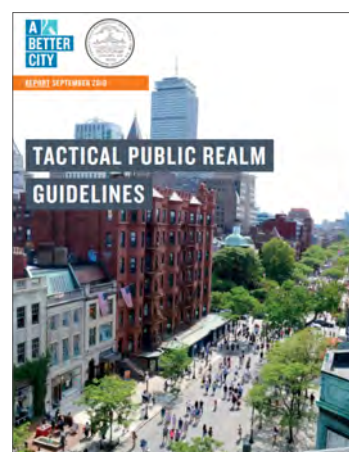
Fast-Tracked: A Tactical Transit Study

Published in 2019 by Street Plans, funded by the Transportation Research Board, this document includes 20 case studies of a variety of "Tactical Transit" projects, from dedicated bus lanes to bus boarding platforms, including operational pilot projects.



Trailnet Slow Your Street How-To Guide

A comprehensive guide to figuring how and why to do a traffic calming demonstration. The guide covers every aspect of the process, from identifying your goals and engaging your community to setting up a demonstration project.



City of Boston Tactical Public Realm Guidelines

This document, published by the City of Boston and Utiile, includes both design guidelines and a how-to guide to the process of implementing a plaza, parklet, outdoor cafe, or street mural.

